MarinTrust Whole fish fishery assessment report

Document TEM-002 (prev. FISH2) - Version 3.0

Issued June 2024 – Effective June 2024

Denmark - Boarfish (Capros aper) - FAO 27, ICES 6-8, Celtic Seas, English Channel, and Bay of Biscay

Re-Approval
WF38

Table 1: Whole fish fishery assessment scope

Fishery name	**Denmark - Boarfish (Capros aper) - FAO 27, ICES 6-8, Celtic Seas, English Channel, and Bay of Biscay**
MarinTrust report code	**WF38**
Type 1 species (common name, Latin name)	*Boarfish (Capros aper)*
Fishery location	*FAO 27, ICES 6-8, Celtic Seas, English Channel, and Bay of Biscay*
Gear type(s)	*Pelagic trawl*
Management authority (country/state)	*European Union (Denmark)*

Table 2: Applicant and Certification Body details

Application details			
Applicant(s)		*FF Skagen A/S, Thyborøn*	
Applicant country		*Denmark*	
Certification Body details			
Name of Certification Body		LRQA	
Contact Information for CB (e.g. email address/address/telephone number)		E: mt-ca@lrqa.com LRQA, 4-5 Lochside Way, Edinburgh Park, EH12 9DT T: +44 800 092 0452	
Fishery Assessor name		Jim Missen	
CB Peer Reviewer name		Sam Peacock	
Number of assessment days	5	**Assessment period**	06/2025 to 06/2026

Table 3: Assessment outcome

Assessment outcome (See Table 4 for a summary of assessment determination)		*Approve*
Approval validity	Valid from: *06/2025*	Valid until: *06/2026*
CB peer reviewer evaluation		*Agree with assessment determination*
Fishery Assessment Peer Review Group external peer reviewer evaluation		*Agree with assessment determination*

Table 4: Assessment determination

Assessment determination **Summary of assessment and outcome**	
The boarfish (*Capros aper*) fishery is a highly selective pelagic trawl fishery, comprising approximately 99.9% of total landings. Bycatch occurs in very small quantities and is comprised primarily of mackerel (*Scomber scombrus*) at around 0.01% of landings. This assessment evaluated boarfish in ICES Subareas 6–8 (Celtic Seas, English Channel, and Bay of Biscay) and mackerel in Subareas 1–8, 14, and Division 9.a (Northeast Atlantic and adjacent waters). Both species are listed as Least Concern by the IUCN and are not listed in any CITES appendix, making them eligible for approval as MarinTrust whole fish material and meeting the MarinTrust management requirements (Category M). Boarfish was reclassified by ICES as a Category 1 species, up from its previous Category 3 designation, following a 2024 benchmark workshop (WKBHMB). Reflecting this improved understanding of the stock, the fishery now has reference points available for stock management, with the most recent ICES stock assessment published in September 2024. For 2025, the Pelagic Advisory Council (PelAC) recommends that the Total Allowable Catch (TAC) for boarfish be set in line with Maximum Sustainable Yield (MSY) at 38,295 tonnes. This recommendation aligns with the commitment to sustainable fisheries management, reflects the precautionary approach endorsed by ICES, and is consistent with the most recent catch advice issued by ICES. Therefore, boarfish is assessed as a Category A species, and meets the requirements of this section. The latest mackerel stock assessment for the Northeast Atlantic and adjacent waters was also published in September 2024, and removals of the species were included in the stock assessment process. The mackerel biomass remains above the limit reference point, and as such, mackerel is assessed as a Category C species, and meets the requirements of this section. The fishery, using pelagic trawls, has a minimal impact on marine habitats. The ICES Working Group on Bycatch of Protected Species (WGBYC) collates and analyses information related to endangered, threatened, and protected (ETP) species and indicates compliance with ETP requirements. In relation to the fishery's impact on marine ecosystems, the ICES Working Group on Widely Distributed Stocks (WGWIDE) considers the impact to be minimal. As a result, the boarfish fishery meets the MarinTrust standards concerning marine habitats, ETP species, and ecosystem impacts. The boarfish fishery in FAO Area 27, ICES Subareas 6–8 (Celtic Seas, English Channel, and Bay of Biscay) passed all the MarinTrust requirements in this assessment; therefore, its re-approval is recommended for use as raw material in MarinTrust-certified products. Last data accessed: May 25, 2025.	
Summary of CB peer review	This assessment considers the Danish Boarfish fishery in ICES Subareas 6-8. While the fishery has previously been approved against the MarinTrust whole fish requirements, this is the first time it has been assessed against Version 3. The assessor has provided sufficient evidence to demonstrate that the fishery meets all of the requirements of the Version 3 whole fish assessment, and the peer

	reviewer agrees with the recommendation to maintain the approval of whole fish material from this fishery.
Summary of external peer review (see Appendix 1 for the full peer review report)	*Refer Annex 1: External Peer Review report*
Notes for on-site auditor	*N/A*

Table 5: General results

Section	Outcome (Pass/Fail)
M1 - Management Framework	Pass
M2 - Surveillance, Control and Enforcement	Pass
E1 - Impacts on ETP Species	Pass
E2 - Impacts on Habitats	Pass
E3 - Ecosystem Impacts	Pass

Table 6: Species-specific results

See Table 7 for further details of species categorisation.

Category	Species name (common & Latin name)	Outcome (Pass/Fail/n/a)	
Category A	*Boarfish (Capros aper)*	A1	Pass
		A2	Pass
		A3	Pass
		A4	Pass
Category B	No species identified	-	
Category C	*Mackerel (Scomber scombrus)*	Pass	
Category D	No species identified	-	

Table 7: Species categorisation table

List of all the species assessed. Type 1 species are assessed against Category A or Category B. Type 1 species must represent 95% of the total annual catch. Type 2 species are assessed against Category C or Category D. Type 2 species may represent a maximum of 5% of the annual catch. Species that comprise less than 0.1% of the catch are not required to be assessed or listed here.

Species name (common & Latin name)	Stock	CITES listed yes/no	IUCN Red list Category	% catch composition	Management (Y/N)	Category (A, B, C or D)
Boarfish (Capros aper)	Subareas 6–8 (Celtic Seas,English Channel, and Bay of Biscay)	No	LC [1]	~99.9%	Yes	A

Mackerel (Scomber scombrus)	Subareas 1–8 and 14, and in Division 9.a (Northeast Atlantic and adjacent waters)	No	LC[2]	~0.01%	Yes	C

Rationale

No new catch composition data was provided for this assessment. Therefore, previously submitted applicant data from 2022 through February 2024 has been used. Based on the previous assessment, the catch composition was reported as approximately 99.9% boarfish (*Capros aper*) and 0.01% mackerel (*Scomber scombrus*). The fishery is generally free from bycatch from September through February; however, from March onward, a bycatch of mackerel can occur. At this time, the fishery typically ceases[3].

Although this is the second assessment of the fishery, it is designated as an initial assessment because it is the first to be conducted under the MarinTrust Version 3 whole fish fishery criteria. The previous assessment, completed in 2024, was based on Version 2.

As a result of the 2024 ICES benchmark, boarfish was reclassified as a Category 1 species, up from its previous designation as Category 3[3]. This reflects improved information on the fishery, and as a result, ICES now provides annual assessments and advice. Considering this, boarfish was assessed as a Category A species, since it is: listed as Least Concern by the IUCN, not listed in any CITES appendix, managed by the Danish Fisheries Agency, and comprises more than 95% of the fishery's total catch. This differs from the initial assessment, in which boarfish was designated as Category B.

Mackerel was assessed as a Category C species, since it is: listed as Least Concern by the IUCN, not listed in any CITES appendix, managed by the Danish Fisheries Agency, and comprises less than 5% of the fishery's total catch.

References

1. Capros aper (Boarfish) | IUCN Red List API. (2025). Iucnredlist.org. https://apistaging.iucnredlist.org/species/198557/9029155https://apistaging.iucnredlist.org/species/170354/6764736
2. Scomber scombrus (Atlantic Mackerel) | IUCN Red List API. (2025). Iucnredlist.org. https://apistaging.iucnredlist.org/species/170354/6764736
3. ICES. (2024). Benchmark workshop on horse mackerel and boarfish (WKBHMB). Figshare. https://doi.org/10.17895/ices.pub.25002482.v2

Management requirements

This section, or module, assesses the general management regime applied to the fishery under assessment. It comprises two parts, M1, which evaluates the management framework, and M2, which evaluates surveillance, control and enforcement within the fishery.

1.6. All management criteria must be met (pass) for a fishery to pass the Management requirements.

1.6.1. The sub-criteria offer a structured evidence base to demonstrate that the fishery sufficiently meets the management criteria. It is not expected that sub-criteria are assessed independently of the main criterion.

M1 Management framework

M1.1	**M1.1 There is an organisation responsible for managing the fishery.** *In reaching a determination for M1.1, the assessor should consider if the following is in place:*
	M1.1.1 The management and administration organisations within the fishery are clearly identified.
	M1.1.2 The functions and responsibilities of the management organisations include the overall regulation, administration, science and data collection and enforcement roles, and are documented and publicly available.
	M1.1.3 Fishers have access to information and/or training materials through nationally recognised organisations.
Outcome	*Pass*

Rationale

Denmark is a member of the European Union (EU), and as such its fisheries are managed in accordance with the Common Fisheries Policy (CFP), the latest reform of which was introduced in 2013 through Regulation (EU) No 1380/2013[1]. The CFP aims to ensure that the activities of the fishing and aquaculture sectors are environmentally sustainable in the long term and are managed in a way that aligns with the objectives of achieving economic, social and employment benefits.

The CFP provides the foundation for all Danish fisheries regulations, and each Member State is responsible for its implementation. However, several regulations differ to reflect specific Danish conditions. The Danish Fisheries Agency, a part of the Ministry of Food, Agriculture and Fisheries, is responsible for ensuring adherence to EU standards[2]. The functions of the Danish Fisheries Agency include the management and control of the fisheries sector, supervision of production levy funds, and the administration of the overall regulation[3].

Each year, the Council of the European Union, in its Agriculture and Fisheries configuration, receives proposals from the European Commission on catch limits for the following year. These proposals are discussed among Member States and the Commission until an agreement is reached. The

Council then reaches political agreement on the regulations and sets the total allowable catches (TACs), fixes fishing effort limits, and decides on other conservation measures necessary for the sustainability of fish stocks[4]. Based on the above, the fishery passes Clause M1.1.
References 1. European Commission. (2023). Common fisheries policy (CFP). Oceans-And-Fisheries.ec.europa.eu. https://oceans-and-fisheries.ec.europa.eu/policy/common-fisheries-policy-cfp_en 2. FAO Fisheries & Aquaculture. (n.d.). Www.fao.org. https://www.fao.org/fishery/en/facp/dnk 3. FAOLEX. (2025). Fao.org. https://www.fao.org/faolex/results/details/fr/c/LEX-FAOC195062/ 4. How fishing catch limits and quotas are set. (2025). Consilium. https://www.consilium.europa.eu/en/policies/how-fishing-catch-limits-and-quotas-are-set/

M1.2	**M1.2 Fishery management organisations are legally empowered to take management actions.** *In reaching a determination for M1.2, the assessor should consider if the following is in place:*	
	M1.2.1 There are legal instruments in place to give authority to the management organisation(s) which can include policies, regulations, acts or other legal mechanisms.	
	M1.2.2 Vessels wishing to participate in the fishery must be authorised by the management organisation(s).	
	M1.2.3 The management system has a mechanism in place for the resolution of legal disputes.	
	M1.2.4 There is evidence of the legal rights of people dependent on fishing for food or livelihood.	
Outcome	*Pass*	

Rationale

In Denmark, all management actions are undertaken by national legislation arising from the implementation of CFP regulations, with some variations to reflect the characteristics of the fisheries in the country.

The Fisheries and Fish Farming Act (the Fisheries Act), originally created in 1999 as the Fisheries Act and most recently reformed in 2023, serves as the principal legal framework for fisheries management in Denmark[1]. The provision of the Act provide the management organisation the ability to undertake management actions such as implementation of European Union directives and regulations, managing the effects of fishing on the environment, procedures for prosecuting fishing

offences, and addressing disputes between fishers.

All commercial fishing vessels that fish in Danish waters on the basis of Danish fishing quotas are required to be registered in the vessel register of the Danish Maritime Authority as well as the vessel register of the Danish Fisheries Agency[2]. The fleet management system in Denmark is based on an entry-exit regime, and a permit must be granted by the Danish Fisheries Agency[3].

Based on the above, the fishery passes Clause M1.2.

References

1. Danish Parliament. (2023). Lovbekendtgørelse nr. 205 af 1. marts 2023 om fiskeri og fiskeopdræt [Consolidated Act No. 205 of 1 March 2023 on Fisheries and Aquaculture]. https://www.retsinformation.dk/eli/lta/2023/205
2. *Fishing ships*. (2025). Www.dma.dk. https://www.dma.dk/ship-survey-and-registration/ship-registration-and-fees/fishing-ships-excluding-greenlandic-ships
3. Danish Fisheries Agency. (2024). Annual report on fishing fleet capacity 2023 – Denmark. https://lfst.dk/Media/638693399235473740/DK%20Fleet%20report%202023.pdf

M1.3	**M1.3**	**There is an organisation responsible for collecting data and (scientifically) assessing the fishery.** *In reaching a determination for M1.3, the assessor should consider if the following is in place:*
	M1.3.1	The organisation(s) responsible for collecting data and assessing the fishery is/are clearly identified.
	M1.3.2	The management system receives scientific advice regarding stock, non-target species and ecosystem status.
	M1.3.3	Scientific advice is independent from the management organisation(s) and transparent in its formulation through a clearly defined process.
Outcome	*Pass*	

Rationale

In the case of the fishery, the collection of data and assessment of the fishery is carried out by multiple organisations. The organisation responsible for the scientific assessment is the International Council for the Exploration of the Sea (ICES). ICES is an intergovernmental marine science organization, meeting societal needs for impartial evidence on the state and sustainable use of our seas and oceans[1]. They collate data collected by its twenty member countries, of which Denmark is one, to provide independent management advice for fisheries within their area of competence. The ICES Working Group on Widely Distributed Stocks (WGWIDE) conducts an annual stock assessment on Boarfish in FAO 27. WGWIDE provides fishery management advice, including catch recommendations based on the outcomes of the assessment. As required under Regulation (EC) No 1921/2006, the Danish Fisheries Agency is responsible for the collection of logbooks and landing data, which are provided annually to ICES as part of the data call[2,3]. The organisation that is

the primary provider of scientific information in Denmark is the National Institute of Aquatic Resources (DTU Aqua), part of the Technical University of Denmark[4].

Based on the above, the fishery passes Clause M1.3.

References

1. Who we are. (n.d.). Www.ices.dk. https://www.ices.dk/about-ICES/who-we-are/Pages/Who-we-are.aspxhttps://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A02006R1921-20140110
2. ICES. (2025). Data Call Guidelines. Figshare. https://doi.org/10.17895/ices.pub.28163492.v3
3. DTU Aqua. (2025). @Dtudata. https://www.aqua.dtu.dk/english/

M1.4	**M1.4 The fishery management system is based on the principles of sustainable fishing and a precautionary approach.** *In reaching a determination for M1.4, the assessor should consider if the following is in place:*
	M1.4.1 A policy or long-term management objective for sustainable harvesting based on the best scientific evidence and a precautionary approach is publicly available and implemented for the fishery.
Outcome	*Pass*

Rationale

The CFP underscores the principles of sustainable fishing and a precautionary approach in Objective 1 of Regulation (EU) No. 1380/2013. Here it states the CFP "shall ensure that fishing and aquaculture activities are environmentally sustainable in the long-term and are managed in a way that is consistent with the objectives of achieving economic, social and employment benefits, and of contributing to the availability of food supplies[1]."

As previously mentioned, the essence of this document is instilled within the national fisheries regime of Denmark in The Fisheries Act. The Fisheries Act states that the purpose of the Act that "is to ensure a sustainable basis for commercial fishing and related industries, as well as the possibility of recreational fishing, through management that ensures the protection and recovery of living resources in salt and fresh water and the protection of other animal and plant life[2]."

Denmark has shown a commitment to sustainable harvesting through its programme run with the European Maritime, Fisheries and Aquaculture Fund (EMFAF) programme. The Danish programme corresponds to the 2021 to 2027 period and intends to implement Priorities 1 and 2 of the EMFAF. Priority 1 relates fisheries and the fostering sustainable fisheries and the restoration and conservation of aquatic biological resources[3].

Based on the above, the fishery passes Clause M1.4.

References

1. European Parliament and Council. (2013). Regulation (EU) No 1380/2013 of the European Parliament and of the Council of 11 December 2013 on the Common Fisheries Policy, amending Council Regulations (EC) No 1954/2003 and (EC) No 1224/2009 and repealing Council Regulations (EC) No 2371/2002 and (EC) No 639/2004 and Council Decision 2004/585/EC. Official Journal of the European Union, L 354, 22–61. https://eur-lex.europa.eu/eli/reg/2013/1380/oj/eng
2. Danish Parliament. (2023). Lovbekendtgørelse nr. 205 af 1. marts 2023 om fiskeri og fiskeopdræt [Consolidated Act No. 205 of 1 March 2023 on Fisheries and Aquaculture]. https://www.retsinformation.dk/eli/lta/2023/205
3. Programme Summary Denmark -Programme for the European Maritime Fisheries and Aquaculture Fund 2021-2027 -CCI 2021DK14MFPR001. (n.d.). Retrieved May 25, 2025, from https://oceans-and-fisheries.ec.europa.eu/document/download/a4e930c0-8083-4776-a30b-576eada616ae_en?filename=emfaf-programme-denmark-summary_en.pdf

M1.5	**M1.5 There is a clearly defined decision-making process which is transparent, with processes and results made publicly available.** *In reaching a determination for M1.5, the assessor should consider if the following is in place:*	
	M1.5.1	There is participatory engagement through which fishery stakeholders and other stakeholders can access, provide information, consult with, and respond to, the management systems' decision-making process.
	M1.5.2	The decision-making process is transparent, with results made publicly available.
	M1.5.3	The fishery management system is subject to periodic internal or external review to validate the decision-making process, outcomes and scientific data.
Outcome	*Pass*	

Rationale

The fisheries management decision-making process relevant to this fishery is transparent, with resources and results being publicly available. This ethos is reflected both in the CFP and in Danish national legislation. ICES advice, which guides relevant fisheries management advice is published online, while decisions and relevant documents at the European Union level are released on the European Commission website. All information used in the production of this MarinTrust assessment is publicly available online.

Based on the above, the fishery passes Clause M1.5.

References

M2 Surveillance, control and enforcement

M2.1	**M2.1**	**There is an organisation responsible for monitoring compliance with fishery laws and regulations.** *In reaching a determination for M2.1, the assessor should consider if the following is in place:*
	M2.1.1	There is an organisation responsible for monitoring compliance with specific monitoring, control and surveillance (MCS) mechanisms in place.
	M2.1.2	There are relevant tools or mechanisms used to minimise IUU fishing activity.
	M2.1.3	There is evidence of monitoring and surveillance activity appropriate to the intensity, geography, management control measures and compliance behaviour of the fishery.
Outcome	*Pass*	

Rationale

Compliance with fishery laws and regulations in the EU is achieved through a multifaceted approach. The role of the EU fisheries control system is to ensure compliance with the CFP[1]. Fisheries control is the remit of Member States who are responsible for controlling their fishing activities in accordance with the national regulations, while then European Commission verifies how they fulfil their responsibilities. In Denmark, this is the Danish Fisheries Agency.

The European Fisheries Control Agency (EFCA) is a European Union agency established in 2005 to improve coordination of individual Member States compliance activities. EFCA's mission is to promote the highest common standards for control, inspection, and surveillance under the CFP[2]. Its primary role is to organise coordination and cooperation between national control and inspection activities so that the rules of the CFP are respected and applied effectively.

In practice, organisational responsibility for monitoring compliance with fishery laws and regulations is carried out by the Member States' control authorities. Joint deployment plans (JDP) are a coordinated deployment of national means to monitor and inspect fishing activities relevant to the CFP. They can apply within European Union waters under a Specific Control and Inspection Programme (SCIP) or in international waters through a Regional Fisheries Management Organisation (RFMO)[3]. The Fisheries Act provides for the application and enforcement of both EU and domestic legislation.

Based on the above, the fishery passes Clause M2.1.

References

1. EU fisheries control system. (n.d.). Oceans-And-Fisheries.ec.europa.eu. https://oceans-and-fisheries.ec.europa.eu/fisheries/rules/enforcing-rules/eu-fisheries-control-system_en
2. Mission and strategy | European Fisheries Control Agency. (n.d.). Www.efca.europa.eu.

https://www.efca.europa.eu/en/content/mission-and-strategy
3. Joint Deployment Plans in EU waters | European Fisheries Control Agency. (2024). Europa.eu. https://www.efca.europa.eu/en/content/joint-deployment-plans-eu-waters

M2.2	**M2.2 There is a framework of sanctions which are applied when infringements against laws and regulations are discovered.** *In reaching a determination for M2.2, the assessor should consider if the following is in place:*
	M2.2.1 The laws and regulations provide for penalties or sanctions that are adequate in severity to act as an effective deterrent.
	M2.2.2 There is no evidence of systematic non-compliance.
Outcome	*Pass*

Rationale

All EU Member States are required to operate a system of sanctions in line with EU fisheries controls to ensure compliance with the CPF. These sanctions are to be 'dissuasive, proportionate, and effective'. To ensure continuity in the application of fishing rules and infringements between EU Member States, the Control Regulations set out minimum sanctions and points resulting from serious infringements[1].

Since 2012, EU Member States have been required to operate a point system to sanction fishing license holders and fishing vessel masters when they commit serious infringements. Any vessel that accumulates more than a certain number of points in a three-year period will have its fishing licence suspended for at least two months. For repeat offences, the penalty increases to four, eight and twelve months respectively. If, after the end of the fourth suspension period, the offender again incurs the necessary number of points, the fishing licence must be withdrawn permanently[2]. This framework of sanction application set out in the Control Regulations, has been transposed into Danish national law under Chapter 22 of the Fisheries Act[3].

The Commission can monitor how countries enforce their sanctioning systems through investigations and audits. Starting in 2026, countries must report the number of inspections carried out and violations in their national annual report on control and inspections.

Based on the above, the fishery passes Clause M2.2.

References

1. European Commission. (2023). Commission Regulation (EU) 2023/2842 of 13 December 2023 amending Regulation (EU) 2015/2447 as regards the rules for the release for free circulation of goods following repair or alteration. Official Journal of the European Union, L 2023/2842, 1–5. https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=OJ:L_202302842
2. Infringements and sanctions - European Commission. (2024, January 9). Oceans-And-Fisheries.ec.europa.eu. https://oceans-and-fisheries.ec.europa.eu/fisheries/rules/enforcing-rules/infringements-and-sanctions_en

3. Danish Parliament. (2023). Lovbekendtgørelse nr. 205 af 1. marts 2023 om fiskeri og fiskeopdræt [Consolidated Act No. 205 of 1 March 2023 on Fisheries and Aquaculture]. https://www.retsinformation.dk/eli/lta/2023/205

M2.3	**M2.3 There is substantial evidence of widespread compliance in the fishery, and no substantial evidence of IUU fishing.** *In reaching a determination for M2.3, the assessor should consider if the following is in place:*	
	M2.3.1	The level of compliance is documented and updated routinely, statistically reviewed and available.
	M2.3.2	Fishers provide additional information and cooperate with management/enforcement agencies/organisations to support the effective management of the fishery.
	M2.3.3	The catch recording and reporting system is sufficient for effective traceability of catches per vessel and supports the prevention of IUU fishing.
Outcome	*Pass*	

Rationale

The Danish Annual Report on fishing fleet capacity in 2023, the latest report available, provides information on infringements and inspections in relation to management measures. A total of 1,476 vessels inspections were conducted over the time period, comprising 1,151 port inspections and 325 inspections at sea. These figures mirror those reported over the preceding years, in 2022 and 2021. During 2023, a total of 116 infringements were recorded, arising to port and at sea inspections. This is comparative to the figures provided in 2022 and 2021, which were 151 and 217 respectively. While figures are not provided for 2024, the preceding years indicate a robust and transparent enforcement regime is in place for the Danish fishing fleet as a whole. Based on the above, there is substantial evidence of widespread compliance and no significant evidence of IUU fishing.

Based on the above, the fishery passes Clause M2.3.

References

1. Danish Fisheries Agency. (2024). Annual report on fishing fleet capacity 2023 – Denmark. https://lfst.dk/Media/638693399235473740/DK%20Fleet%20report%202023.pdf
2. Danish Fisheries Agency. (2023). Annual report on fishing fleet capacity 2022 – Denmark. https://fiskeristatistik.fiskeristyrelsen.dk/stat/flaaderapport/DK_Fleetreport_2022.pdf
3. Danish Fisheries Agency. (2022). Annual report on fishing fleet capacity 2021 – Denmark. https://oceans-and-fisheries.ec.europa.eu/document/download/af9ff2e4-3364-482c-91bc-2fecc9754a7d_en?filename=2021-fleet-capacity-report-denmark_en.pdf&prefLang=fr

Species requirements

This section, or module, comprises of four species categories. Each species in the catch is subject to an assessment against the relevant species category in this section (see clauses 1.2 and 1.3 and Table 6).

Type 1 species can be considered the 'target' or 'main' species in the fishery under assessment. They make up the bulk of the catch and a subjected to a detailed assessment. Type 1 species must represent 95% of the total annual catch. If a species-specific management regime is in place for a Type 1 species, it shall be assessed under Category A. If there is no species-specific management regime in place for a Type 1 species, it shall be assessed under Category B.

Type 2 Species can be considered the 'non-target' species in the fishery under assessment. They comprise a small proportion of the annual catch and are subjected to a relatively high-level assessment. Type 2 species may represent a maximum of 5% of the annual catch. If a species-specific management regime is in place for a Type 2 species, it shall be assessed under Category C. If there is no species-specific management regime in place for a Type 2 species, it shall be assessed under Category D.

Species that comprise less than 0.1% of the catch are not required to be assessed or listed here.

Category A species

2.1. All clauses must be met for a species to pass the Category A assessment.

2.1.1. If a species fails any of the Category A clauses, it should be re-assessed as a Category B species.

A1 Data collection

A1.1	**A1.1 Landings data are collected such that the fishery-wide removals of this species are known.**
Outcome	*Pass*
Rationale The boarfish fishery is a relatively new fishery, with landings first recorded in 2001. Data is submitted by ICES member countries to the Working Group on Widely Distributed Stocks (WGWIDE). The CFP places a clear obligation on Member States to account for and land all catch unless specific exemptions apply. These reporting requirements are fulfilled in Denmark through the maintenance of mandatory logbooks, landing declarations, and, in some cases, through electronic monitoring (EM) within the remit of the Danish Fisheries Agency. Discards are also accounted for in both target and non-target fisheries operations. Primarily, boarfish is caught as part of directed pelagic trawl operations, and discarding occurs in demersal fleets where the species is caught as unwanted bycatch[1]. Discard data from non-directed fisheries have been included in the model since 2023. Denmark did not provide estimates of bycatch in 2023.	

The 2024 assessment of the fishery was the first conducted since the benchmarking in 2024[2]. A configuration of the Stock Synthesis assessment model (SS3) was used, replacing the previously used state space surplus production model as per the benchmarking. SS3 is an age-structured population dynamics model[3]. Data for the model is pooled from commercial catches, international catches, discards, and multiple acoustic surveys (WESPAS and PELGAS) spanning 2003 to 2024. The summation of fishery-wide removals is displayed below on Figure 1.

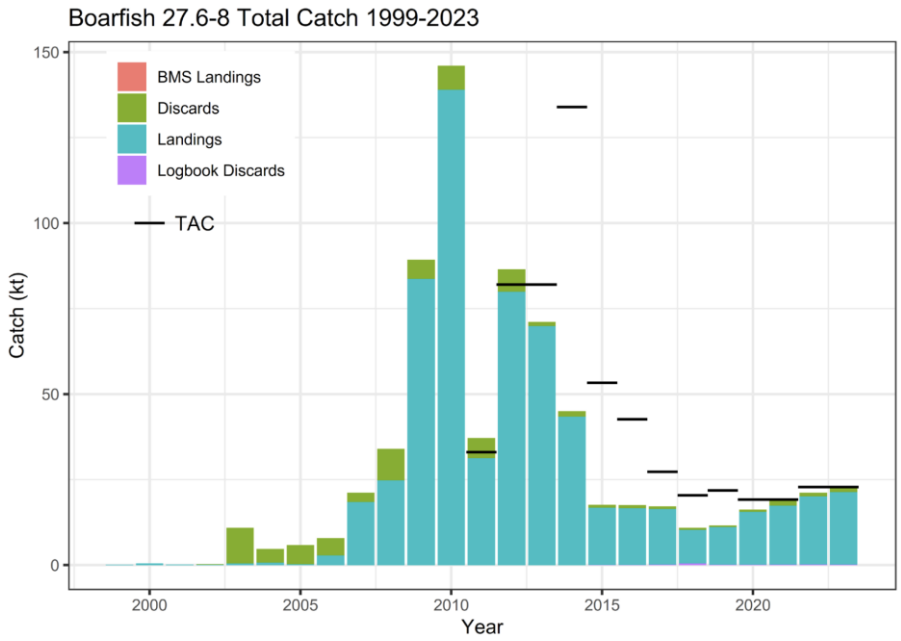

Figure 1. Boarfish in ICES subareas 27.6-8. History of catch and TAC.[1]

Based on the above, the fishery passes Clause A1.1.

References

1. International Council for the Exploration of the Sea. (2023). Working Group on Widely Distributed Stocks (WGWIDE) 2023 report. https://ices-library.figshare.com/articles/report/Working_Group_on_Widely_Distributed_Stocks_WGWIDE_/26993227
2. International Council for the Exploration of the Sea. (2023). Benchmark workshop on horse mackerel and boarfish (WKBHMB). https://ices-library.figshare.com/articles/report/_Benchmark_workshop_on_horse_mackerel_and_boarfish_WKBHMB_/25002482
3. National Oceanic and Atmospheric Administration. (n.d.). Stock Synthesis. NOAA Virtual Laboratory. https://vlab.noaa.gov/web/stock-synthesis

A1.2	**A1.2 Sufficient additional information is collected to enable an indication of stock status to be estimated.**
Outcome	*Pass*

Rationale

The most recent ICES advice was produced in 2024 and incorporated a revised ICES fishery categorisation to a Category 1 fishery from the previous Category 3 definition. This categorisation is reserved for stocks that are not considered to be data-limited, and this category includes stocks with full analytical assessments and forecasts, as well as stocks with quantitative assessments based on production models[1]. The information used in the SS3 model was pooled from the 2024 WESPAS and PELGAS acoustic surveys and a number of groundfish surveys that were compiled using the Vector Autoregressive Spatio-Temporal (VAST) method. The results are considered to be more robust than previous assessments. The stock assessment summary is provided below in Figure 2.

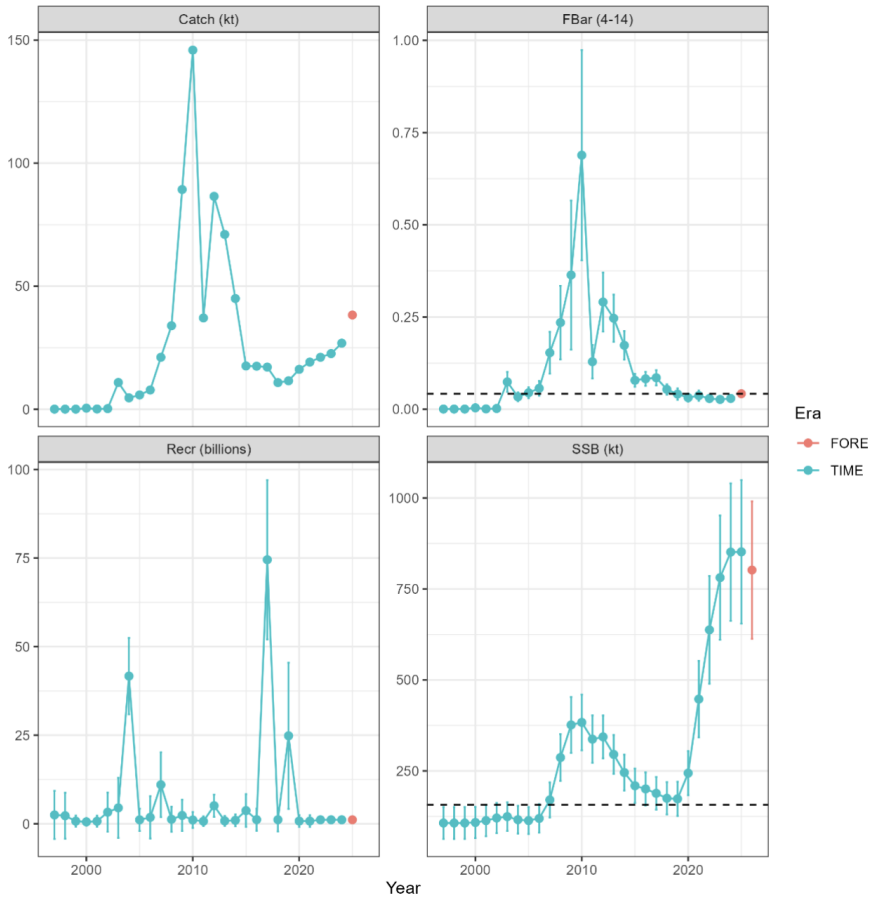

Figure 2. Boarfish in ICES subareas 27.6-8. Stock summary. Red points correspond to the forecast period under the F2026 = FMSY scenario. Dashed lines correspond to Blim, FMSY[2].

Based on the above, the fishery passes Clause A1.2.

References

1. International Council for the Exploration of the Sea. (2012). General context of ICES advice. https://www.ices.dk/community/Documents/Advice/General_context_of_ICES_advice_2012.pdf
2. International Council for the Exploration of the Sea. (2024). Working Group on Widely Distributed Stocks (WGWIDE) (ICES Scientific Reports, 6(81), 913 pp.). https://doi.org/10.17895/ices.pub.26993227

A2 Stock assessment

A2.1	**A2.1**	**A stock assessment is conducted at least once every 3 years (or every 5 years if there is substantial supporting information that this is sufficient for the long-term sustainable management of the stock) and considers all fishery removals and the biological characteristics of the species.**
Outcome	*Pass*	
Rationale ICES provides advice for Category 1 stocks annually (previously biannually as required for Category 3 stocks, under which the stock was categorised until 2024). This ensures regular and relevant updates on stock status and recommended management settings. This approach ensures that changes to stock dynamics and ecological conditions are captured, and relevant advice is provided to promote sustainable fisheries management. Based on the above, the fishery passes Clause A2.1.		
References		

A2.2	**A2.2**	**The assessment provides an estimate of the status of the biological stock relative to a reference point or proxy.**
Outcome	*Pass*	
Rationale The fishery was unregulated prior to the introduction of a TAC in 2011. As a result of the reclassification of the fishery as a Category 1 species, reference points were estimated in line with ICES recommendations[1]. Recruitment within the fishery is sporadic and generally at a low level with intermittent large recruitment events, most recently in 2017 and 2019. As a result, the stock spawning biomass (SSB) has increased rapidly to an estimate of 850,000 tonnes, well above the Blim of 157,000 tonnes. The stock is forecast to remain above MSY $B_{trigger}$ in 2025 and 2026[2]. Reference points are provided below on Table 1. Table 1. Boarfish reference points and their technical basis[2].		

Reference Point	Value	Technical Basis
B_{lim}	156,762t	Average SSB associated with above average recruitments
B_{pa}	190,845t	$B_{pa} = B_{lim} \times \exp(1.645 \times \sigma)$, $\sigma = 0.124$
MSY $B_{trigger}$	190,845t	MSY $B_{trigger} = B_{pa}$
F_{lim}	0.175	Stochastic long-term simulations (50% probability median SSB > B_{lim})
F_{pa}	0.042	F including the advice rule leading to SSB ≥ B_{lim} with a 95% probability. Variability of biology, fishery and advice error.
Unconstrained F_{MSY}	0.133	Long-term simulation F value without advice rule leading to maximum yield
F_{MSY}	0.042	F_{P05}

Based on the information, the fishery passes Clause A2.2.

References

1. International Council for the Exploration of the Sea. (2021). ICES fisheries management reference points for category 1 and 2 stocks: Technical guidelines. https://doi.org/10.17895/ices.pub.18638150
2. International Council for the Exploration of the Sea. (2023). Working Group on Widely Distributed Stocks (WGWIDE). ICES Scientific Reports, 6(81), 913 pp. https://doi.org/10.17895/ices.pub.26993227

A2.3

A2.3 The assessment provides an indication of the volume of fishery removals which is appropriate for the current stock status.

Outcome *Pass*

Rationale

The ICES assessment estimates that the total catch for 2025 will be 26,858 tonnes, based on national quotas, expected uptake, and discard estimates. In 2025 F_{MSY} is estimated to be at a level of 38,295 tonnes. PelAC endorsed the approach that TAC should be set in line with this figure for 2025[1]. ICES will release the 2025 report later in the year. This assessment helps indicate the appropriate volume of fishery removals given the current stock status, ensuring sustainable fishing practices are followed.

Based on the information, the fishery passes Clause A2.3.

References

1. Pelagic Advisory Council. (2024, October 4). Recommendations on 2025 fishing opportunities (Ref. No. 2425PAC01). https://www.pelagic-ac.org/wp-content/uploads/2024/10/2425PAC01-PelAC-Recommendations-TACs-2025.pdf

A2.4

A2.4 The assessment is subject to internal or external peer review.

Outcome	*Pass*

Rationale

ICES Technical Guidelines outline a transparent review process for stock assessments, emphasizing the importance of public availability of data and methodologies. This is exemplified by the ICES Transparent Assessment Framework, ensuring transparency of ICES advisory processes[1]. It makes the data, methods, and results from ICES assessments easy to find, explore, and re-run. This allows stakeholders to examine the input data used in models, ensuring accountability and fostering trust in the assessment outcomes. The review process includes expert evaluations and opportunities for public comment.

Based on the information, the fishery passes Clause A2.4.

References

1. International Council for the Exploration of the Sea. (n.d.). Transparent Assessment Framework (TAF). https://www.ices.dk/data/assessment-tools/Pages/transparent-assessment-framework.aspx

A2.5	**A2.5 The assessment is made publicly available.**
Outcome	*Pass*

Rationale

This assessment and all others can be found on the ICES website[1].

Based on the information, the fishery passes Clause A2.5.

References

1. International Council for the Exploration of the Sea. (n.d.). ICES Library. https://ices-library.figshare.com

A3 Harvest strategy

A3.1	**A3.1 There is a mechanism in place by which total fishing mortality of this species is restricted.**
Outcome	*Pass*

Rationale

Total fishing mortality for the species is restricted through the implementation of fishing quotas. Within EU waters, TACs are set annually, generally guided by ICES species advice. Once the TAC is set, it is apportioned among member states through national quotas. The TAC appears to have been effective at restricting fishing mortality, as removals only exceeded the TAC once between 2013 and 2023, and then only by a small margin.

Consistent with the ICES guidance document for Category 1 stock, reference points are provided to achieve MSY. F_{MSY} is set at 0.42 and F_{lim} is set at 0.175. F_{lim} was corroborated by stochastic long-term simulations to ensure a 50% probability of median SSB exceeding B_{lim}. Additionally, F_{pa} is also 0.042, indicating the fishing mortality level that ensures SSB remains above B_{lim} with a 95% probability[1].

Based on the information, the fishery passes Clause A3.1.

References

1. International Council for the Exploration of the Sea. (2023). Working Group on Widely Distributed Stocks (WGWIDE). ICES Scientific Reports, 6(81), 913 pp. https://doi.org/10.17895/ices.pub.26993227

A3.2	**A3.2 Total fishery removals of this species do not regularly exceed the level indicated or stated in the stock assessment. Where a specific quantity of removals is recommended, the actual removals may exceed this by up to 10% ONLY if the stock status is above the limit reference point or proxy.**
Outcome	*Pass*

Rationale

The TAC for the species is consistently set at or below the advice provided by ICES, as shown in Table 2. Between 2013 and 2023, the total removals have not exceeded the TAC except for in one case. This occurred in 2021, where the TAC of 19,152 tonnes was exceeded by 6 t, an overshoot of 0.07%, significantly lower than the 10% threshold. An overview of landings by country, TAC and discards are tabulated below in Table 3.

Table 2. Boarfish in subareas 6–8. ICES advice and catch. All weights are in tonnes. (*EU, UK, and international waters of subareas 6, 7, and 8. ** This advice replaces that issued in 2023)[1].

Year	ICES advice	Catch corresponding to advice	TAC *	ICES catch
2013	MSY approach	82000	82000	71047
2014	MSY approach	133957	133957	44995
2015	DLS approach	53296	53292	17597
2016	Precautionary approach	≤ 42637	42637	17504

2017	Precautionary approach (−36% relative to previous advice)	≤ 27288	27288	17134
2018	Precautionary approach	≤ 21830	20380	10850
2019	Precautionary approach (same advice as for 2018)	≤ 21830	21830	11577
2020	Precautionary approach	≤ 19152	19152	16211
2021	Precautionary approach (same advice as for 2020)	≤ 19152	19152	19166
2022	Precautionary approach	≤ 22791	22791	21115
2023	Precautionary approach (same advice as for 2022)	≤ 22791	22791	22612
2024	MSY approach	≤ 27349	27349	
2025	MSY approach**	≤ 38295		

Table 3. Boarfish in ICES subareas 27.6-8. Landings by country, total discards and TAC by year (tonnes), 2013–2023[2].

Year	Denmark	Germany	Ireland	Netherlands	England	Poland	Scotland	Spain	Portugal	France	Discards	Total	TAC
2013	13184		52250				4380			0	1233	71046	82000
2014	8758		34632	0			35			0	1570	44995	133957
2015	29	5	16325	286	104					3	845	17597	53296
2016	417	7	15974	171	21					14	901	17503	47637
2017	548	4	15485	182	0					3	912	17133	27288
2018	95	2	9513	172	0		0	54	0	12	1001	10850	21830
2019	757	42	9910	318	19			2	5	12	512	11577	21830
2020	198	48	14666	416	62	109	13	1		7	690	16211	19152
2021	4322	109	11923	781	45	44	9	11		9	1912	19166	19152
2022	4305	543	14055	858	73			10		19	1253	21115	22791
2023	4798		15501	74	1		765	31	1	2	1439	22612	22791
	0 = <0.5t												

Based on the information, the fishery passes Clause A3.2.

References

1. International Council for the Exploration of the Sea. (2024). Boarfish (Capros aper) in subareas 6–8 (Celtic Seas, English Channel, and Bay of Biscay). In Report of the ICES Advisory Committee
2. International Council for the Exploration of the Sea. (2023). Working Group on Widely Distributed Stocks (WGWIDE). ICES Scientific Reports, 6(81), 913 pp. https://doi.org/10.17895/ices.pub.26993227

A3.3	**A3.3 Commercial fishery removals are prohibited when the stock has been estimated to be below the limit reference point or proxy (small quotas for**

	research or non-target catch of the species in other fisheries are permissible).
Outcome	*Pass*

Rationale

Under the MSY approach, ICES advises that the total catch for boarfish should not exceed 38,295 tonnes in 2025[1]. As this is the first time the fishery has complete reference points under the new ICES Category 1 designation, there is no historical precedent for management action if the stock is estimated to fall below the limit reference point (LRP). However, in other cases where stock levels have fallen below the LRP, ICES has recommended fisheries closures[2]. While conservation measures may exist at national or regional levels, they were not reviewed by ICES. Starting in 2024, ICES will monitor and assess the fishery annually to ensure that if stock levels fall below limits, immediate management actions are implemented.

Based on the information, the fishery passes Clause A3.3.

References

1. International Council for the Exploration of the Sea. (2023). Working Group on Widely Distributed Stocks (WGWIDE). ICES Scientific Reports, 6(81), 913 pp. https://doi.org/10.17895/ices.pub.26993227
2. International Council for the Exploration of the Sea. (2024). Sandeel (Ammodytes spp.) in divisions 4.a–b and Subdivision 20 (Sandeel Area 3r): Northern and central North Sea, Skagerrak [Report]. https://doi.org/10.17895/ices.pub.27202851

A4 Stock status

A4.1	**A4.1**	**The stock is at or above the target reference point; OR IF NOT: the stock is above the limit reference point or proxy and there is evidence that a fall below the limit reference point would result in fishery closure; OR IF NOT: the stock is estimated to be below the limit reference point or proxy, but fishery removals are prohibited.**
Outcome	*Pass*	

Rationale

Based on the 2024 ICES assessment, the boarfish stock is above target reference points with fishing pressure on the stock below F_{MSY}, and spawning-stock size is above MSY $B_{trigger}$, B_{pa}, and B_{lim1}. All catch scenarios are provided below on Table 4.

Table 4. Boarfish in subareas 6-8. Annual catch scenarios. Weights are in tonnes[1].

Scenario	Catch 2025	F 2025	SSB 2026	% SSB Change	% Catch Change	% Advice Change	Prob $SSB<B_{lim}$ in 2026
$F_{2025} = F_{MSY}$	38295	0.042	801834	-5.9	42.6	40	0.00
$F_{2025} = 0$	0	0.000	836867	-1.8	-100	-100	0.00
$F_{2025} = F_{lim}$	149575	0.175	700324	-17.8	457	447	0.00
$F_{2025} = F_{2024}$	26860	0.029	812290	-4.7	0.045	-1.8	0.00
$SSB_{2026} = B_{lim}$	761883	1.663	156762	-81.6	2738	2686	0.50
SSB_{2026} = MSYBtrigger	721714	1.465	190845	-77.6	2588	2539	0.17
$Catch_{2025}$ = $0.8*Catch_{2024}$	21486	0.023	817205	-4.1	-20	-21.4	0.00
$Catch_{2025}$ = $Catch_{2024}$	26858	0.029	812292	-4.7	0	-1.8	0.00
$Catch_{2025}$ = $1.25*Catch_{2024}$	33572	0.037	806152	-5.4	25	22.8	0.00

Based on the information, the fishery passes Clause A4.1.

References

1. International Council for the Exploration of the Sea. (2023). Working Group on Widely Distributed Stocks (WGWIDE). ICES Scientific Reports, 6(81), 913 pp. https://doi.org/10.17895/ices.pub.26993227

Category B species

Category B species are assessed using a risk-based approach.

2.2. The risk matrix in Table B(a) shall be used when assessing a Category B species when estimates of Fishing mortality (F), Biomass (B) and reference points are available.

2.3. The risk matrix in Table B(b) shall be used when assessing a Category B species when no reference points are available.

B1	**A3.3 Commercial fishery removals are prohibited when the stock has been estimated to be below the limit reference point or proxy (small quotas for research or non-target catch of the species in other fisheries are permissible).**
Table used B(a) or B(b)	No Category B Species
Outcome	Choose an item.
Rationale	

References

Category C species

2.4. All clauses must be met for a species to pass the Category C assessment.

2.4.1. Where a species fails this Category C clause, it should be assessed as a Category D species instead, except if there is evidence that the species is currently below the limit reference point.

C1.1	**C1.1 Fishery removals of the species in the fishery under assessment are included in the stock assessment process OR are considered by scientific authorities to be negligible.**
Outcome	*Pass*

Rationale

The latest ICES stock assessment on Mackerel in subareas 1–8 and 14, and in Division 9.a was released in September 2024. An MSY approach was applied and ICES advised that catches for 2025 should not exceed 576,958 tonnes. Figure 3 displays mackerel catches through time. A revised perception of the stock was caused by the inclusion of a new year's data. This modified the relative weight of the different data sources in the assessment leading to a slightly increased influence of the tagging data in the assessment model[1]. The relative influence of data sources are dependent on both the length of the time-series and the consistency of the information. Recent assessments have systematically revised the estimates of SSB upwards and F downwards for the period 2010 to 2020, with revisions for years more recent not observed.

The stock assessment and the short-term forecast includes ages from 0 to 12. Recruitment is presented at age 2 as abundance estimates at ages 0 and 1 are highly uncertain and only becomes apparent in ages 2 to 3. The assessment model incorporates inputs from steel and RFID tagging and three survey indices (SSB index from the triennial egg survey, abundances indices from the IBTS survey and IESSNS survey. Catch data is also included however data prior to 2000 is given a very low weight in the assessment. This is due to significant underreporting suspected to have occurred during the period. Discarding is known to take place and is assumed to be negligible in recent years at 0.3% of the total catch weight in 2023. However, it is only qualified for part of the fishery as such partial discard estimates are included in the assessment.

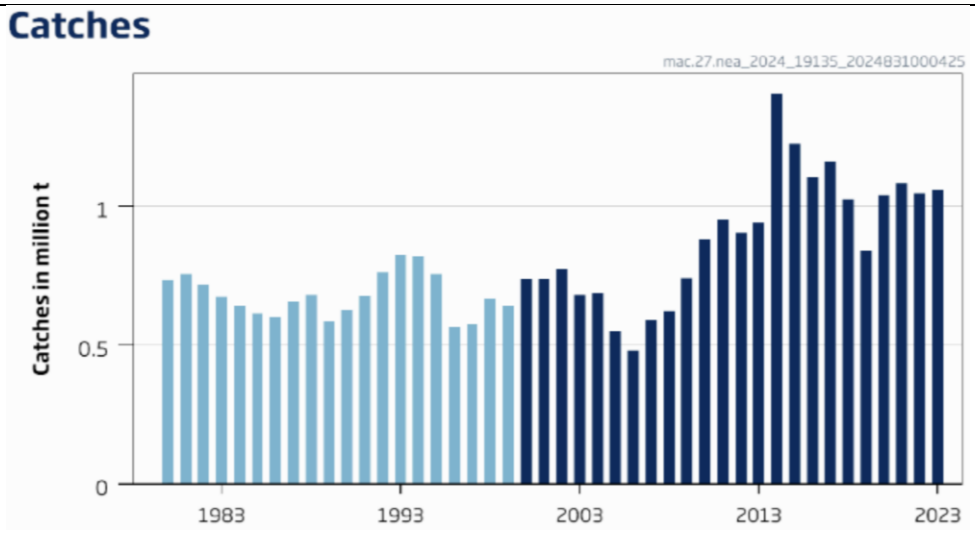

Figure 3. Catches of mackerel in subareas 1–8 and 14, and in Division 9.a. Catches prior to 2000 have been downweighed in the assessment[1].

Based on the information, the fishery passes Clause C1.1.

References

1. International Council for the Exploration of the Sea. (2023). Mackerel (Scomber scombrus) in subareas 1–8 and 14, and in Division 9.a (Northeast Atlantic and adjacent waters). ICES Scientific Reports, 6(81), 913 pp. https://doi.org/10.17895/ices.pub.26993227

C1.2	**C1.2**	**The species is considered, in its most recent stock assessment, to have a biomass above the limit reference point (or proxy), OR removals by the fishery under assessment are considered by scientific authorities to be negligible.**
Outcome	*Pass*	

Rationale

The 2024 ICES advice indicates that fishing pressure on the stock is above F_{MSY} and between F_{pa} and F_{lim} with SSB (2,774,753 tonnes) above MSY $B_{trigger}$ (2,580,000 tonnes), B_{pa} (2,580,000 tonnes), and B_{lim} (2,000,000 tonnes)[1].

The elevated fishing pressure in recent years can largely be attributed to the absence of TAC sharing agreements between fishing nations. As a result, individual parties declared unilateral quotas in 2023.

ICES do not review conservation aspects and associated management measures may exist at a national or regional level. Figure 4 provides a summary of the stock assessment.

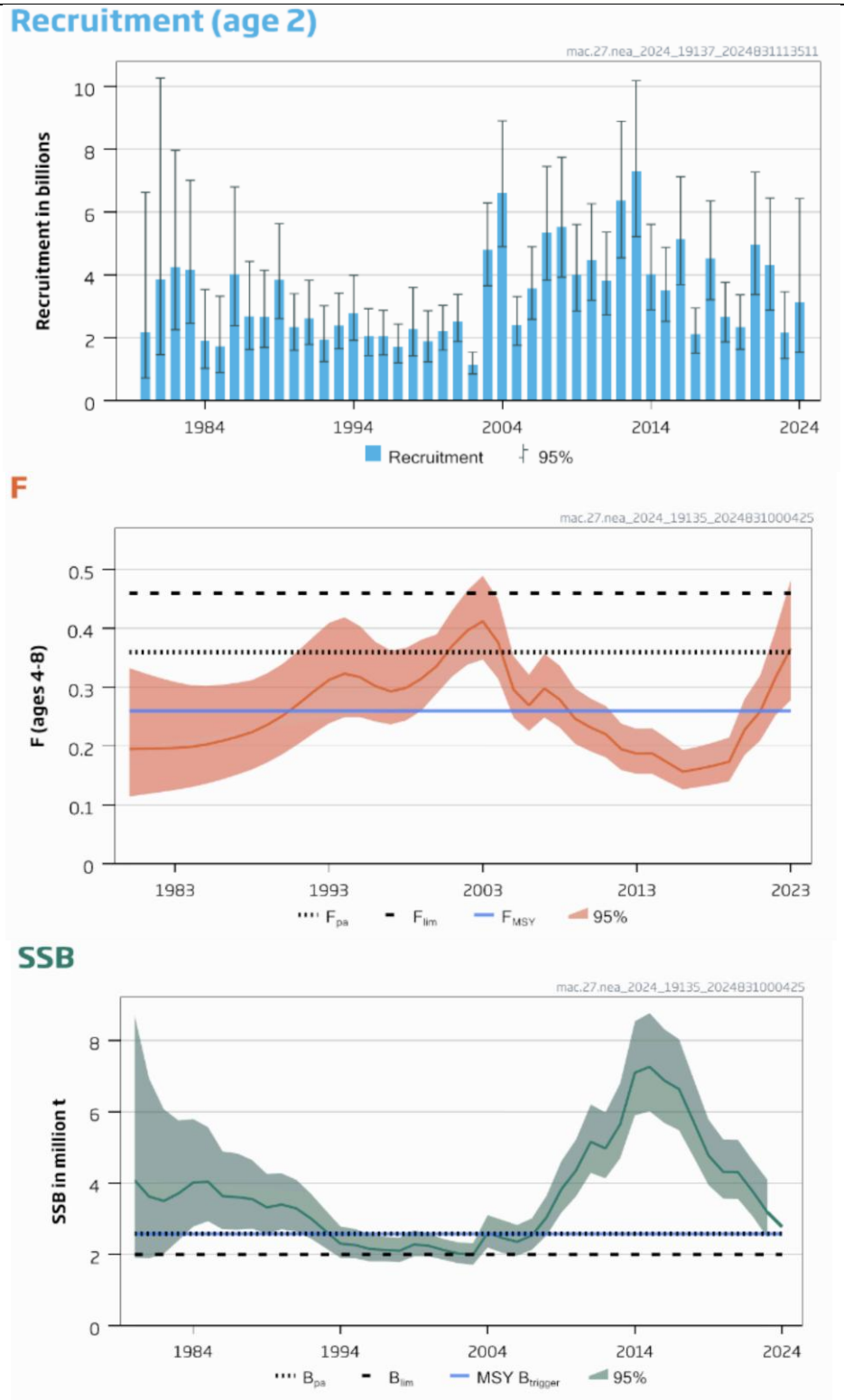

Figure 4. Mackerel in subareas 1–8 and 14, and in Division 9.a. Summary of the stock assessment[1].

Based on the information, the fishery passes Clause C2.1.

References

1. International Council for the Exploration of the Sea. (2023). Mackerel (Scomber scombrus) in subareas 1–8 and 14, and in Division 9.a (Northeast Atlantic and adjacent waters). ICES Scientific Reports, 6(81), 913 pp. https://doi.org/10.17895/ices.pub.26993227

Category D species

Category D species are assessed against a risk-based approach.

2.5. The Productivity-Susceptibility Analysis (PSA) in Table D(a) shall be used when assessing Category D species.

2.6. Table D(b) shall be used to calculate the overall PSA risk rating for the Category D species.

2.7. Should the PSA indicate a high risk, further assessment shall be completed against the requirements in Table D(C).

Productivity Susceptibility Analysis (PSA) and scores

Table D(a) provides detailed values and scores for the species productivity and susceptibility attributes and attributes, the assessor shall use Table D(a) to the PSA table.
Table D(b) is used to calculate the overall PSA risk rating for the Category D species.

Species name	No Category D Species	
Productivity attributes	**Value**	**Score**
Average age at maturity		
Average maximum age		
Fecundity		
Average maximum size		
Average size at maturity		
Reproductive strategy		
Mean Trophic Level (MTL)		
Density dependence (to be used when scoring invertebrate species only)		
Susceptibility attributes		
Areal overlap (availability): Overlap of the fishing effort with a species concentration of the stock		
Encounterability: The position of the stock/ species within the water column relative to the fishing gear, and the position of the stock/species		

within the habitat relative to the position of the gear		
Selectivity of gear type: Potential of the gear to retain species		
Post-capture mortality (PCM): The chance that, if captured, a species would be released and that it would be in a condition permitting subsequent survival		
Average productivity score		
Average susceptibility score		
PSA risk rating (from Table D(b))		
Compliance rating		

Further assessment for Category D species

Should the PSA indicate a high risk, further assessment shall be completed against the requirements D1 and D2 – Table D(c).

D1	**D1. The potential impacts of the fishery on this species are considered during the management process, and reasonable measures are taken to minimise these impacts.**
Outcome	Choose an item.
Rationale	
References	

D2	**D2. There is no substantial evidence that the fishery has a significant negative impact on the species.**
Outcome	Choose an item.
Rationale	
References	

Ecosystem requirements

This section, or module, assesses the impacts that the fishery under assessment may have on key ecosystem components: ETP species, habitat and the wider ecosystem.

3.1. All ecosystem criteria must be met (pass) for a fishery to pass the Ecosystem Requirements.

3.1.1. The sub-criteria offer a structured evidence base to demonstrate that the fishery sufficiently meets the ecosystem criteria, it is not expected that sub-criteria are assessed independently of the main criterion.

E1 Impact on Endangered, Threatened or Protected species (ETP species)

E1.1	**E1.1 Information on interactions between the fishery and ETP species is collected.** *In reaching a determination for E1.1, the assessor should consider if the following is in place:*
	E1.1.1 ETP species which may be directly affected by the fishery have been identified.
	E1.1.2 Interactions between the fishery and ETP species are recorded and reported to management organisations.
	E1.1.3 Collection and analysis of ETP information is adequate to provide a reliable indication of the impact the fishery has on ETP species.
Outcome	*Pass*

Rationale

ICES requires that, in line with the ICES data call specifications, member countries submit complete fishing effort and monitoring effort data for all métiers, even when no bycatch has been reported. ICES recommends that member countries use at-sea observers and electronic monitoring protocols, corresponding to systems with appropriately placed cameras and suitable species identification methods, for the collection of robust and reliable bycatch data. This data is most commonly linked to at-sea observations carried out for the purposes of fisheries monitoring in accordance with the EU Data Collection Framework Regulation 2017/1004 (DCF)[1].

The Working Group on Bycatch of Protected Species (WGBYC) was established in 2007 by ICES to cover the Northeast Atlantic and adjacent sea areas (Baltic, Mediterranean, and Black Seas). The working group collates and assesses information on bycatch monitoring and assessment for ETP species, including mammals, birds, turtles, and rare fish[2]. As a member country, Denmark provides data to the working group.

Denmark has been actively engaged in EM since 2009 and submitted EM estimates of ETP species bycatch to the 2024 WGBYC data call[3]. Real-time monitoring of bycatches during the fishing and onboarding phases is achieved through the combination of computer vision, camera technology, and video processing[4].

Based on the information, the fishery passes Clause E1.1.

References

1. International Council for the Exploration of the Sea. (2023). Bycatch of endangered, threatened and protected species of marine mammals, seabirds and marine turtles, and selected fish species of bycatch relevance. https://ices-library.figshare.com/articles/report/Bycatch_of_endangered_threatened_and_protected_species_of_marine_mammals_seabirds_and_marine_turtles_and_selected_fish_species_of_bycatch_relevance/27999401
2. International Council for the Exploration of the Sea. (n.d.). Working Group on Bycatch of Protected Species (WGBYC). https://www.ices.dk/community/groups/Pages/WGbyc.aspx
3. International Council for the Exploration of the Sea. (2023). Working Group on Bycatch of Protected Species (WGBYC). ICES Scientific Reports, 6(103), 1029 pp. https://doi.org/10.17895/ices.pub.27762723
4. International Council for the Exploration of the Sea. (2022). Working Group on Bycatch of Protected Species (WGBYC). ICES Scientific Reports, 4(103), 1029 pp. https://doi.org/10.17895/ices.pub.24659484

E1.2	**E1.2 The fishery has no significant negative impact on ETP species.** *In reaching a determination for E1.2, the assessor should consider if the following is in place:*
	E1.2.1 The information collected in relation to E1.1.3 indicates that the fishery does not have a significant negative impact on ETP species.
Outcome	*Pass*

Rationale

The output of the 2024 WGBYC data call for ETP species bycatch data in ICES 6-8 is provided below in Table 5. The fishery's operations, including the use of selective fishing gear and adherence to quota regulations, contribute to maintaining healthy populations of ETP species within the fishing area. There is no evidence that the fishery has a significant impact on ETP species.

Table 5. Summary of reported fishing effort, monitoring days (for métiers with reported bycatch only, all métiers combined), number of bycaught specimens, and incidents in 2023 per ecoregion, provided through the ICES WGBYC 2024 data call[1].

Ecoregion	Fishing Effort (das)	Total Observed Effort (das)	Monitoring Coverage (%)	variable	Aves	Elasmobranchii	Holocephali	Mammalia	Reptiles	Teleostei	Chondrostei	Petromyzonti
Bay of Biscay and the Iberian Coast	747,617	2,162	0.29	Species	12	24	1	4	1	24		
				Individuals	260	5,586	2,295	260	8	100,001		
				Incidents	105	258	90	159	6	1,102		
Celtic Seas	191,405	1,454	0.76	Species	3	29	1	3		14		
				Individuals	15	5,553	575	14		29,310		
				Incidents	12	566	258	12		3,948		
Greater North Sea	479,246	3,071	0.64	Species	13	21	1	6		21		2
				Individuals	129	8,780	1,655	304		9,766		18
				Incidents	76	1,287	71	148		1,589		2

Based on the information, the fishery passes Clause E1.2.
References 1. International Council for the Exploration of the Sea. (2023). Working Group on Bycatch of Protected Species (WGBYC). ICES Scientific Reports, 6(103), 237 pp. https://doi.org/10.17895/ices.pub.27762723

E1.3	**E1.3 There is an ETP management strategy in place for the fishery.** *In reaching a determination for E1.3, the assessor should consider if the following is in place:*	
	E1.3.1	There are measures applied to the fishery which are designed to manage the impacts of the fishery on ETP species.
	E1.3.2	The measures are considered likely to achieve the objectives of regional, national and international legislation relating to ETP species.
Outcome	*Pass*	

Rationale

The management of ETP species is prevalent in the objectives of European fisheries policy. Objective 3 of the EU Common Fisheries Policy (EU1380/2013) is to ensure that negative impacts of fishing activities on the marine ecosystem are minimized[1]. This includes avoiding and reducing unwanted catches of commercial and protected species.

An assessment of ETP species mortality as the result of bycatch is required to fulfil the objectives of the EU Marine Strategy Framework Directive (MSFD; 2008/56/ EC)[2]. Specifically, Descriptor 1 that states that biological diversity is maintained should include species (birds, mammals, reptiles, and noncommercially exploited species of fish and cephalopods) which are regionally at risk from incidental bycatch[3].

ETP management is also features in EU Regulation 2019/1241 on the conservation of fisheries resources and the protection of marine ecosystems through technical measures. Here the objective states to "ensure that incidental catches of sensitive marine species, including those listed under directives 1992/43/EC and 2009/47/EC that are a result of fishing, are minimised and where possible eliminated so that they do not represent a threat to the conservation status of these species"[4].

Further, the reduction of the impact of fisheries on sensitive species is one of the objectives of the European Commission adopted 2023 Action Plan “Protecting and restoring marine ecosystems for sustainable and resilient fisheries”. It requires that threshold values for the maximum allowable mortality rate for incidental catches of selected species are developed and implemented in fisheries management measure[5].

The obligation to monitor and to collect data is with the Member States which should cooperate with each other and with the Commission to coordinate data collection activities within the same

region. Denmark is committed to the monitoring and mitigation of ETP species bycatch. It reported five projects to the WGFTFB: Trawlvision, "Observing and quantifying fish behaviour in relation to active fishing gear" project, The BeFish Network project, The Hydrolift project and the EveryFish project[6].

Based on the information, the fishery passes Clause E1.3.

References

1. European Parliament and Council of the European Union. (2013). Regulation (EU) No 1380/2013 of the European Parliament and of the Council of 11 December 2013 on the Common Fisheries Policy, amending Council Regulations (EC) No 1954/2003 and (EC) No 1224/2009 and repealing Council Regulations (EC) No 2371/2002 and (EC) No 639/2004 and Council Decision 2004/585/EC. Official Journal of the European Union, L 354, 22–61. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32013R1380
2. European Parliament and Council of the European Union. (2008). Directive 2008/56/EC of the European Parliament and of the Council of 17 June 2008 establishing a framework for community action in the field of marine environmental policy (Marine Strategy Framework Directive). Official Journal of the European Union, L 164, 19–40. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32008L0056
3. European Commission. (n.d.). Descriptors under the Marine Strategy Framework Directive. https://environment.ec.europa.eu/topics/marine-environment/descriptors-under-marine-strategy-framework-directive_en
4. European Parliament and Council of the European Union. (2019). Regulation (EU) 2019/1241 of the European Parliament and of the Council of 20 June 2019 on the conservation of fisheries resources and the protection of marine ecosystems through technical measures, amending Council Regulations (EC) No 1967/2006, (EC) No 1224/2009 and Regulations (EU) No 1380/2013, (EU) 2016/1139, (EU) 2018/973, (EU) 2019/472 and (EU) 2019/1022 of the European Parliament and of the Council, and repealing Council Regulations (EC) No 894/97, (EC) No 850/98, (EC) No 2549/2000, (EC) No 254/2002, (EC) No 812/2004 and (EC) No 2187/2005. Official Journal of the European Union, L 198, 105–201. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32019R1241
5. European Commission. (2023). EU Action Plan: Protecting and restoring marine ecosystems for sustainable and resilient fisheries (COM(2023) 102 final). https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52023DC0102
6. International Council for the Exploration of the Sea. (2024). Working Group on Bycatch of Protected Species (WGBYC). ICES Scientific Reports, 6(103), 237 pp. https://doi.org/10.17895/ices.pub.27762723

E2 Impact on the habitat

E2.1	**E2.1 Information on interactions between the fishery and marine habitats is collected.** *In reaching a determination for E2.1, the assessor should consider if the following is in place:*	
	E2.1.1	Habitats which may be directly affected by the fishery have been identified, including any habitats which may be particularly vulnerable.
	E2.1.2	Information on the scale, location and intensity of fishing activity relative to habitats is collected.
	E2.1.3	Collection and analysis of habitat information is adequate to provide a reliable indication of the impact the fishery has on marine habitats.
Outcome	*Pass*	

Rationale

The boarfish fishery is a pelagic trawl fishery which operates in the midwater column[1]. By design, this gear does not come in contact with the seabed; as such, it is not considered to impact the marine habitat. Given the extensive body of evidence supporting this across all pelagic trawls, it is highly unlikely that the boarfish fishery is different in this regard.

Based on the information, the fishery passes Clause E2.1.

References

1. International Council for the Exploration of the Sea. (2023). Working Group on Bycatch of Protected Species (WGBYC). ICES Scientific Reports, 6(103), 237 pp. https://doi.org/10.17895/ices.pub.27762723

E2.2	**E2.2 The fishery has no significant impact on marine habitats.** *In reaching a determination for E2.2, the assessor should consider if the following is in place:*	
	E2.2.1	The information collected in relation to E2.1.3 indicates that the fishery does not have a significant negative impact on marine habitats.
Outcome	*Pass*	

Rationale

The fishery uses pelagic trawls, which are designed to operate in the water column and not impact the marine habitat, and there is no evidence to suggest otherwise.

Based on the information, the fishery passes Clause E2.2.

References

E2.3	**E2.3 There is a habitat management strategy in place for the fishery.** *In reaching a determination for E2.3, the assessor should consider if the following is in place:*	
	E2.3.1	There are measures applied to the fishery which are designed to manage the impact of the fishery on marine habitats.
	E2.3.2	The measures are considered likely to prevent the fishery from having a significant negative impact on marine habitats.
Outcome	*Pass*	
Rationale Considering that pelagic trawl fisheries are not in contact with the seabed and therefore do not impact the marine habitat, a specific habitat management strategy is not considered necessary. Based on the information, the fishery passes Clause E2.3.		
References		

E3 Impact on the ecosystem

E3.1	**E3.1 Information on the potential impacts of the fishery on marine ecosystems is collected.** *In reaching a determination for E3.1, the assessor should consider if the following is in place:*	
	E3.1.1	The main elements of the marine ecosystems in the area(s) where the fishery takes place have been identified.
	E3.1.2	The role of the species caught in the fishery within the marine ecosystem is understood, either through research on this specific fishery or inferred from other fisheries.
	E3.1.3	Collection and analysis of ecosystem information is adequate to provide a reliable indication of the impact the fishery has on marine ecosystems.
Outcome	*Pass*	
Rationale The boarfish fishery is assessed against an MSY-based management approach to ensure, among other things, that the stock continues to provide ecosystem services. This is underpinned by annual ICES stock assessments and scientific advice, ensuring that the management is robust and based		

up-to-date data. Data for these assessments are provided annually by member countries through ICES data calls. Fisheries observer programmes contribute additional data on the fisheries ecosystem impacts. Together, these data sources support the development of management advice designed to minimise negative impacts on the marine ecosystem.

Boarfish are widely distributed from Norway to Senegal and are an important prey item near the Azores and off the coast of Portugal[1]. To date, no studies have indicated significant predation on boarfish outside these areas.

Based on the information, the fishery passes Clause E3.1.

References

1. Egerton, S., Culloty, S., Whooley, J., Stanton, C., & Ross, R. (2017). Boarfish (Capros aper): review of a new capture fishery and its valorization potential. ICES Journal of Marine Science, 74(8), 2059–2067. https://doi.org/10.1093/icesjms/fsx048

E3.2	**E3.2 There is no substantial evidence that the fishery has a significant negative impact on the marine ecosystem.** *In reaching a determination for E3.2, the assessor should consider if the following is in place:*
	E3.2.1 The information collected in relation to E3.1.3 indicates that the fishery does not have a significant negative impact on marine ecosystems.
Outcome	*Pass*

Rationale

Boarfish are widely distributed, ranging from Norway to Senegal, including the Mediterranean and Aegean seas, as well as around the Azores, Canaries, Madeira, and the Great Meteor Seamount. The species inhabits continental shelf seas and upper slopes, occurring at depths of 40–600m[1]. They are zooplanktivorous, primarily feeding on copepods, notably *Calanus helgolandicus*, mysid shrimps, euphausiids, and hiperiid amphipods.

Studies indicate boarfish are a prey species for a significant number of larger fish and seabirds, primarily around the Azores and off the coast of Portugal. It is thought this is due to the relatively scarcity of alternative prey in these regions. In contrast, studies in Irish waters of the Northeast Atlantic have not found evidence that boarfish play a similar trophic role, with boarfish absent from predator stomach content analyses in that region. As new research emerges, this assumption should be revisited to ensure an accurate understanding of boarfish's ecological role across different regions.

While there is evidence to suggest boarfish are an important component of predator diets in specific areas (the Azores and off the coast of Portugal), this does not appear to be true over their entire range. The ICES WGWIDE applies a precautionary approach to the management of the fishery in recognition of its potential ecological interactions with other species.

Based on the information, the fishery passes Clause E3.2.

References

1. Egerton, S., Culloty, S., Whooley, J., Stanton, C., & Ross, R. (2017). Boarfish (Capros aper): review of a new capture fishery and its valorization potential. ICES Journal of Marine Science, 74(8), 2059–2067. https://doi.org/10.1093/icesjms/fsx048

E3.3	**E3.3 There is an ecosystem management strategy in place for the fishery.** *In reaching a determination for E3.3, the assessor should consider if the following is in place:*	
	E3.3.1	There are measures applied to the fishery which are designed to manage the impacts of the fishery on marine ecosystems.
	E3.3.2	The measures are considered likely to prevent the fishery from having a significant negative impact on marine ecosystems.
Outcome	*Pass*	

Rationale

ICES considers ecosystem-based management (EBM) the primary way of managing human activities affecting the marine ecosystem[1]. Accordingly, ICES fishing opportunity advice incorporates EBM principles, accounting for ecosystem productivity changes with the overarching objective of achieving MSY. The goal is to inform policies that ensure high long-term yields while sustaining productive fish stocks within healthy marine ecosystems.

This approach considers the principles laid down by UN Convention on Biological Diversity (CBD) and UN Food and Agriculture Organization (FAO)[2]. In combination with measures to reduce discards, bycatch and interactions with ETP species considers the effects of fisheries beyond the target species itself. A TAC is set for the fisheries, this management framework considers the impacts of fisheries beyond the target species alone.

A total allowable catch (TAC) is set for the fishery and is reviewed annually based on up-to-date scientific advice, historical catch records, and the results of annual monitoring surveys.

Based on the information, the fishery passes Clause E3.3.

References

1. International Council for the Exploration of the Sea. (2023). Guide to ICES advisory framework and principles. https://ices-library.figshare.com/articles/report/Guide_to_ICES_advisory_framework_and_principles/22116890
2. Ecosystem approach. (2019). Ices.dk. https://www.ices.dk/advice/Pages/Ecosystem-approach.aspx

Annex 1: External Peer Review report

Assessment and determination summary

Fishery name	**Denmark - Boarfish (Capros aper) - FAO 27, ICES 6-8, Celtic Seas, English Channel, and Bay of Biscay**
MarinTrust report code	**W38**
Type 1 species (common name, Latin name)	*Boarfish (Capros aper)*
Fishery location	*FAO 27, ICES 6-8, Celtic Seas, English Channel, and Bay of Biscay*
Gear type(s)	*Pelagic trawl*
Management authority (country/state)	*European Union (Denmark)*
Certification Body recommendation	*Approved*
FAPRG reviewer recommendation	Agree with CB determination

Summary of peer review outcomes

Summary *Provide any information about the fishery that the reviewers feel is significant to their decision. This summary is used by the Certification Body in the Fishery Assessment Report.*
The assessor has produced a clear and well-referenced report, providing thorough justifications for all scoring decisions. The peer reviewer concurs with all assessment outcomes and scores, offering only minor comments.
General comments on the draft report provided to the peer reviewer
Thank you, no comment needed.

Peer reviewers should review the fishery assessment report with the primary objective of answering the key questions listed in the table below. When the situation is more complicated, reviewers may answer "See Notes" instead.

1. Has the fishery assessment been fully completed, using the recognised MarinTrust fishery assessment methodology and associated guidance?	Yes
2. Does the Species Categorisation section of the report reflect the best current understanding of the catch composition of the fishery?	Yes
3. Are the scores in the following sections consistent with the MarinTrust requirements (i.e. do the scores reflect the evidence provided)?	Yes
Section M – Management Requirements	Yes
Category A Species	Yes

Category B Species	n/a
Category C Species	Yes
Category D Species	n/a
Section E – Ecosystem Impacts	Yes

Detailed Peer Review Justification

Peer reviewers should provide support for their answers in the boxes provided, by referring to specific scoring issues and any relevant documentation as appropriate.
Detailed justifications are only required where answers given are one of the 'No' options. In other (Yes) cases, either confirm 'scoring agreed' or identify any places where weak rationales could be strengthened (without any implications for the scores).
Boxes may be extended if more space is required.

1. Has the fishery assessment been fully completed, using the recognised MarinTrust fishery assessment methodology and associated guidance?	Yes
Yes, the MT assessment methodology has been adequately used.	
Certification Body response	
Thank you, no comment needed.	

2. Does the species categorisation section of the report reflect the best current understanding of the catch composition of the fishery?	Yes
No new catch data has been provided; therefore, the assessment relies on data from 2022. This is a very clean fishery with minimal bycatch but I would recommend to require the client to provided more updated data on catch and bycatch in the fishery before the next assessment is conducted. A quick note: the first two paragraphs should be removed, as they are quite repetitive.	
Certification Body response	
Thank you, revisions applied.	

3. Is the scoring of the fishery consistent with the MarinTrust requirements, and clearly based on the evidence presented in the assessment report?	Yes
Yes, the fishery scoring is consistent with the MT standard and requirements. The evidence presented is sufficient, and the scores are clearly justified across all sections of the report.	
Certification Body response	
Thank you, no comment needed.	

3a. Are the “Category A Species” scores clearly justified?	Yes

Yes, the information provided by the assessor appears to be adequate, and the scores are clearly and appropriately justified. The boarfish stock is above the target reference points, and a coherent harvest strategy is in place. Minor comments:
A1.1 Just a quick clarification: when stating that "a configuration of the Stock Synthesis assessment model (SS3) was used, replacing the previous state-space surplus production model," does this imply that the surplus production model was used during the 2024 benchmarking process?
A2.2 The use of "kilotonnes" by the assessor seems unusual; it may be worth reconsidering or clarifying this unit of measure.

Certification Body response

Thank you, revisions applied.
A1.1: Apolgies, the sentence was intended to clarify that the state-space surplus production model is no longer in use. Instead, the SS3 model was applied for the first time in the 2024 assessment, following its selection during the 2024 ICES benchmarking process. The report has been edited to reflect this more clearly.
A2.2: Kilotonnes replaced by tonnes.

3b. Are the “Category B Species” scores clearly justified?	n/a

No category B species identified in the catch.

Certification Body response

N/A

3c. Are the “Category C Species” scores clearly justified?	Yes

Mackerel is assessed as a Category C species. While the stock biomass has declined in recent years and concerns remain regarding elevated fishing mortality, the biomass remains above the limit reference point (Blimit). As such, the stock meets the MT requirements.
I would recommend that the assessor clearly state in the text that the elevated fishing pressure is largely a result of the lack of agreement on total allowable catches (TACs) among the coastal states exploiting the stock. Highlighting this issue may help apply additional pressure on these countries to reach a sustainable management agreement.

Certification Body response

Thank you, revisions applied to C1.2.

3d. Are the “Category D Species” scores clearly justified?	n/a
No category D species identified in the catch.	
Certification Body response	
N/A	

Are the scores in “Section M – Management Requirements” clearly justified?	Yes
The fishery is managed under the EU´CFP. No significant changes since previous assessments. My only question is about M2.3. Any of the infringements recorded by the Danish authorities in 2023 was found in this specific fishery being assessed?	
Certification Body response	
Thank you, no revisions applied in this case. M2.3: The Danish Fisheries Agency reports do not provide information on infringements in the fishery.	

Are the scores in “Section E – Ecosystem Impacts” clearly justified?	Yes
Yes, the information provided appears adequate. Pelagic trawls—particularly in the case of boarfish—tend to have a relatively low impact on bycatch species, including ETP species, as well as on habitats and the broader ecosystem. Ecosystem impacts are considered by ICES and management authorities when providing advice and setting TACs for the species. E3.2 It's interesting to learn that this species has been identified as an important prey item primarily in the waters near the Azores, but not in other European waters.	
Certification Body response	
Thank you, revisions applied. E3.2: The cited paper emphasizes that the absence of evidence does not confirm that boarfish are not part of predator diets in the region. The report has been revised to reflect this uncertainty.	

Optional: General peer reviewer comments on the draft report
No further comments.
Certification Body response

N/A